

# AMERICAN FRESH FLOWER

APRIL

1939

# Firestone DEMONSTRATION PLAN



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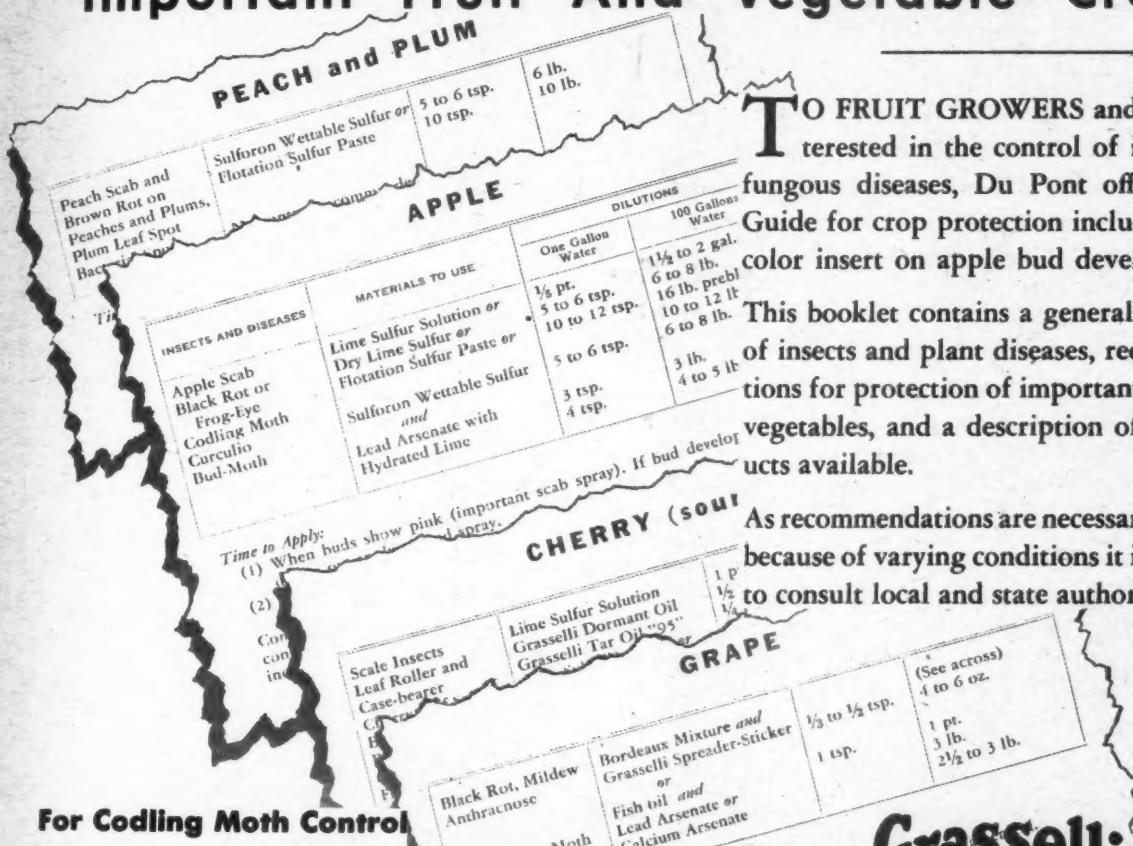
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TO FRUIT GROWERS and others interested in the control of insects and fungous diseases, Du Pont offers a new Guide for crop protection including a full color insert on apple bud development.

This booklet contains a general discussion of insects and plant diseases, recommendations for protection of important fruits and vegetables, and a description of the products available.

As recommendations are necessarily general because of varying conditions it is advisable to consult local and state authorities.

## Grasselli

### PRODUCTS

- \*Fluxit Spreader
- \*NuRexform Lead Arsenate
- \*Lime Sulfur Dry & Liquid
- \*Grasselli Bordeaux Mixture
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- \*Flotation Sulfur Paste
- \*Black Leaf "40"
- Dust Mixtures

\*Trade Marks



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Centennial product of the greatest name in rubber



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IN RUBBER

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MORE PEOPLE RIDE ON GOODYEAR TIRES THAN ON ANY OTHER KIND

AMERICAN FRUIT GROWER

# APS

CONDUCTED IN THE  
INTERESTS OF THE  
AMERICAN POMO-  
LOGICAL SOCIETY

## FRUIT BREEDING

AT the call of the U.S.D.A., a group of workers in fruit breeding from the eastern half of the United States met at Washington, D.C., to report on the results of the fruit breeding activities in the several states represented. The conference was held March 9-11, for the purpose of discussing ways and means of securing a more general co-operation in the testing of new varieties and in the planning of new breeding work.

The experiment stations which have been pursuing their fruit breeding activities for a considerable number of years are exploring the possibilities of fruit improvement through self, sib (plants of same generation having similar characteristics), and back-crosses. Already several promising varieties have been developed as a result of these crosses.

That fruit breeding has distinctly regional, or even state, limitations was rather clearly indicated by the general discussions during the convention. The New England states are using the McIntosh and its types of fruit produced by the use of McIntosh as a parent to much better advantage than is the case in the Middle West. In the Middle West, varieties like the Jonathan and Delicious are the most popular for planting, and fruit breeders in this region are using these varieties in their breeding programs in order to produce new varieties with which to extend the season of these popular sorts. Hardiness of tree and fruit bud in the Upper Mississippi Valley is particularly sought in the breeding programs.

A collection of new and old varieties was critically examined during the conference. Outstanding new apples were the Kendall and Webster, introduced by the New York Agricultural Experiment Station. Webster is a very late-keeping apple of excellent size and medium quality, but because of its late-keeping quality, it is worthy of extended trial. It was introduced this past year. The Iowa Experiment Station's showing of new apples included Secor, Edgewood, Sharon, Joan, and Hawkeye Greening. The quality of Secor was pronounced excellent by most of the members of the group. Edgewood also gave a good impression from the standpoint of quality.

Peach growing and breeding received a great deal of attention during the course of the conference and particular emphasis was placed upon the need for breeding peaches resistant to *Bacterium pruni* and other diseases which are proving disastrous to the industry. There is considerable apprehension that several of the peach diseases, such as X-disease and a new canker recently discovered, will be unwittingly disseminated to other peach growing sections of the United States.

Fruit breeders have gained a vast amount of information relative to the transmission of the various characteristics by the different parent varieties used in the fruit breeding programs of the various state and governmental agencies. It is believed that much more rapid progress will be made from now on due to the

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APRIL 1939

# AMERICAN FRUIT GROWER

The  
NATIONAL FRUIT MAGAZINE

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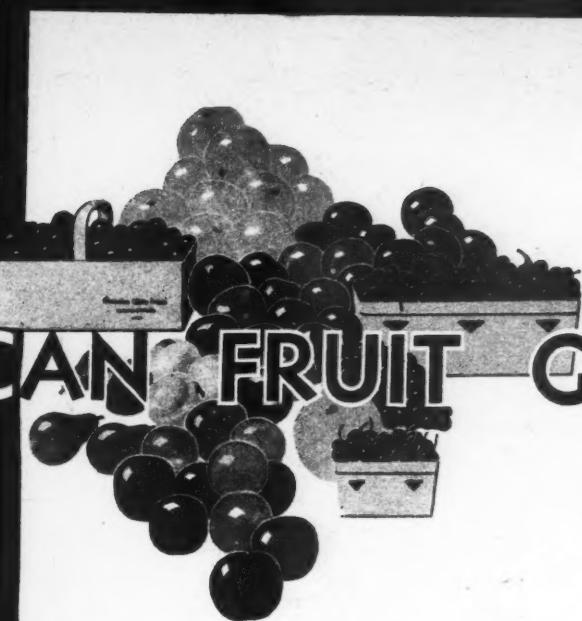
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## A PLAN TO "STAMP OUT" SURPLUSES

HERE is no simple, sure solution to the backwash set in motion by surplus crops. A surplus creates out-of-plumb conditions of "supply and demand" which can be put into balance again, or partly in balance, only in ratio to the advertising and marketing campaigns set in motion by producers, distributors, and retailers. And in these topsy-turvy economic times, with millions dependent upon government relief, the efforts of any industry endeavoring to pull itself up by its own bootstraps in the face of a surplus cannot wholly succeed unless aided and abetted by Federal agencies. Knowing this only too well, the Federal government is once again undertaking to solve the problem of SURPLUSES, this time by means of a scheme for creating demand which is unique enough to indicate that it may be the means of breaking up the log jam of surplus crops, fruits in particular, in an orderly, natural fashion. The government's present plan to "stamp out" surpluses has merit enough, at least, to warrant shoulder-to-shoulder co-operation on the part of everyone concerned in the fruit industry.

Where surpluses have occurred during the past two years, the situation has been lightened, in varying degrees according to the intensity of the problem, through purchases of produce by the Federal Surplus Commodities Corporation. The fruit is in turn distributed from relief stations in metropolitan centers. This action, some fruit growers claim, breaks down any market they might have through regular retail outlets serving the lower income groups. But the government has maintained that consumers they serve in this manner would not be able to purchase the fruit at prevailing retail prices, that widespread free distribution of the fruits is the only way to bring healthful fruit to the people who need it most, that when they become financially stable again these same people will have acquired the fruit-eating habit to the extent that they will be regular consumers of fruit in the future.

The new plan which the FSCC is adopting undertakes to avoid the mistakes of the past and to flatten out surpluses without possibility of upsets to the industries concerned by synthetically creating buying power. To this end the FSCC plans to distribute surplus agricultural commodities through regular trade channels. First, to make certain that their plan will work, the system will be tried in a limited number of cities on an experimental basis. To better determine their stand on such an important move, the government enlisted aid of leaders in all branches of the food industry. This group they called the Food and Grocery Conference Committee and members have already unanimously given their approval of the new setup.

Basis of the plan is the issuance of food stamps to needy persons receiving public aid. Such a move will give low-income families who are already eligible for public assistance additional purchasing power that can be used to obtain only surplus agricultural commodities besides their usual food purchases. Where the system is under test, the regular direct distribution by the FSCC will be halted. The FSCC will have no part in the purchase or distribution of the surpluses; all of the surplus products will

move in the established wholesale and retail trade channels similar to other food commodities. There will be no effort by the government to fix prices or margins for the designated surplus commodities. It is expected that the increased volume of retail sales will bring about a reduction in margins. Therefore, say marketing officials, greatest potential value of the plan will be realized if all consumers are able to increase their purchases of surplus products because of the lower prices.

As now proposed, the plan calls for purchases of books of stamps by eligible families on a voluntary basis. The books are to include stamps of two colors, stamps of one color to be used for purchase of regular groceries and the other for the surplus products. An official list of surplus commodities will be issued by the Secretary of Agriculture and will be amended from time to time to meet current marketing conditions. As the plan is set up in the experimental cities there will be variations to test the proposal under different conditions of operation. One variation is to issue only one color of stamps with the understanding that they be used to purchase only the surplus products.

A simple system for wholesaler and retailer redemption of the stamps will be worked out so the operation of the plan will be of no hindrance to the food marketer.

For this careful approach toward a better way to move surpluses, the government is to be commended. The entire plan carries out an assertion stated time and again on AMERICAN FRUIT GROWER editorial pages—that most of our marketing troubles do not stem from overproduction, but are the result of underconsumption. It now remains to be seen if private fruit marketing agencies will lend their co-operation to this plan that has been worked out and approved by their own representatives. Every fruit grower owes it to himself and his industry to follow the work of the FSCC in the experimental cities, to do whatever he can to make the plan work to the end that overproduction exists no more, that we may more rapidly attain a consumption-production balance.

# It Pays to Use INTERNATIONAL HARVESTER Tractors

A new season is here, bringing with it new opportunities for better farming. You can take advantage of those opportunities by using modern tractor power . . . and that is where the line of International Harvester Tractors comes into the picture.

In this line you will find models especially adapted to orchard work. The Model T-20 TracTracTor shown here is popular with fruit growers because of its economy, power, and ease of handling. If a wheel-type orchard tractor is what you're looking for, the Model 0-14, Model W-30, and Model 10-20 offer compact power and dependable performance at low cost.

## INTERNATIONAL HARVESTER COMPANY

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Chicago, Illinois

International T-20 TracTracTor operating a sprayer in a spring setting on the fruit farm of F. M. Barden, Glenn, Mich.



# INTERNATIONAL HARVESTER

# SULPHUR SPRAYS

## INFLUENCE ON LEAF EFFICIENCY

By NORMAN F. CHILDERS

Ohio State University

SULPHUR has been used as a spray for over 100 years. J. Robertson of England initiated it into the spray field in 1821 when he recommended, "It should be mixed with soapsuds and dashed violently against the tree with a rose syringe." Later, in 1852, Grison mixed a spray which was undoubtedly the forerunner of liquid lime-sulphur in this country—a material prepared by boiling together sulphur and slackened lime. The liquid was diluted and splashed on vines to control mildew.

Lime-sulphur as a spray was first used in this country by F. Dusey of Fresno, Calif., when he coated his fruit trees with a lime-sulphur-salt sheep dip in an attempt to kill San Jose scale. If it killed lice on sheep, he reasoned, it should kill lice on trees. It did, his trees grew better, and the spray soon became the standard scale insecticide.

Lime-sulphur as a foliage spray was first suggested by Prof. Cordley of Oregon in 1908. Cordley noticed that trees which were given the dormant spray shortly after the leaves had begun to appear usually had less scab than ones which received it before the leaves emerged. His subsequent tests with lime-sulphur on foliage indicated its superiority to Bordeaux as a scab spray.

Since these early uses of sulphur as a spray, growers and experiment station workers have tried many chemically and mechanically different sulphur combinations in search of a form less injurious to the foliage, yet effective in insect and disease control. Liquid lime-sulphur seems to be the one sulphur spray at which most attention and concern have been directed. That something should be done about the general use of liquid lime-sulphur on foliage was clearly recognized by



The influence of spray materials on photosynthesis or food manufacture by apple leaves is being intensively studied in several sections of the country. In the above photograph taken inside the "weather control" chamber at Ohio State University, where apple trees can be subjected to any set of weather conditions they might undergo in the orchard, sprayed and unsprayed apple leaves are shown adjusted to test cups. The tubing attached to these cups is connected to carbon dioxide absorption towers. The amount of carbon dioxide which a leaf removes from a given air supply is proportional to its rate of food manufacture. Prof. Childers is shown adjusting intricate apparatus.

G. E. Sanders in the Annapolis Valley of Nova Scotia. In 1911, before liquid lime-sulphur came into general use in this region, the total apple yield was 1.7 million barrels, but with increased use of the spray during the next eight years the total yield never attained the million mark. By 1921, however, there was almost an entire shift to fungicides other than liquid lime-sulphur and the apple crop in this year amounted to 1.5 million barrels. The abandonment of lime-sulphur resulted in an increase in crop of almost 100 per cent.

Within the past 15 years, especially within the past seven or eight, considerable data have been collected which show the relatively greater detrimental effects on trees of liquid lime-sulphur as compared with other

scab fungicides. The early reports of lime-sulphur injury were made largely on the basis of foliage burn apparent to the naked eye. These injuries were obvious to growers and station men alike. But as the caustic properties of the spray have been gradually reduced by additions of ferrous sulphate, more lime and other materials, resulting in less leaf burning, it has been necessary to study more carefully any injury which these sprays unwittingly may be causing.

From these later studies it has been clearly recognized that continued use of lime-sulphur may cause reductions in rate of tree growth even though the foliage appears approximately normal, thus resulting in cumulative effects year after year.

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A prominent fruit wholesaler is Bob Blair of the Northern Ohio Food Terminal firm, The A. C. Blair Co. He's a strong advocate of consumer education through advertising of fruits.

## "BETTER TELLING"

By R. F. BLAIR

TIME and again I've been asked what we can do to move more fruit, to somehow make consumers include more fruit in their daily diet. There's no question in my mind but that other commodities literally "steal the show" from fruit when it comes to comprehensive consumer education either by direct advertising or through intelligent publicity. Fortunately, fruit interests—some more than others—are awakening to the rather costly fact that to increase markets there has to be an increase in promotion efforts. The per capita consumption of fruits can and must be increased manyfold if this business of fruit production and marketing is to be a profitable one.

In order to create demand on the part of consumers, I believe we should call fruits to their attention, at the time they are on the market in greatest quantity. And we must secure positive co-operation from retailers. I'm afraid that the retailer too often sticks to set prices for fruit even though the price prohibits profitable movement before a big spoilage loss sets in, or even if the supply becomes great enough to slump the wholesale price during the time he is holding the original fruit purchases. It actually amounts to the dealer taking the price decline on fruits the same as he does on other items.

On this matter of increasing the

use of fruits as healthful foods, I'm convinced that we have underconsumption rather than overproduction.

The development of home refrigeration, smaller kitchens, no basement storage space, and other modern angles of city life have brought a demand for consumer type packages. While we handle all fruits and vegetables, our main fruit is apples. We act as dealers in handling around 60 per cent of our business volume and the rest is sold on commission.

Another market change in the package side of the business is the box for eastern apples. The box is packed easier by growers, bruising is lessened, right now the dealer gets a little more weight, and the commercial storage rate is five cents cheaper for the box than for the bushel basket. From reports I've been getting, box prices will be lower this year, so the box will compete with the basket even in original price.

There's no mistaking the necessity of having fruit packed according to grade. This has become more and more important with the increase in truck movement of fruit from orchard to market. During the past three years, the truck has changed the whole fruit marketing picture. It has meant that most of our supply sources are now located in a five-state area, that

(Continued on page 16)

# MIDDLEMN ON FRUIT PRODUCTION



The Cleveland commission house, Cleveland, W. dreds of fruit growers. Sam Wilson fruit market

## "BETTER TELLING"

By S. WILSON

"DOES a label mean anything when I sell fruit on commission?"

Since you have asked me this question, I'll reply emphatically. A good brand identified with an attractive label really helps when the fruit is sold in competition with other fruits. First of all, however, fruit packed under the brand must be carefully graded and truthfully marked if the brand is to become established with consistent buyers. From 85 to 90 per cent of the fruit which we handle is sold on commission. We have made more or less of a specialty of local fruits, principally apples and peaches, with some of the other fruits in season. It has become apparent to

# THEM SPEAKS

## PROOTION PROBLEMS



house, controlling, Wilson Co. is known to handle Wilson fruit marketing situation in article below.

## TEGRADING"

By S. WILSON

me, through this type of selling over a number of years, that growers who put up a good pack reap the benefit of what might appear to less careful producers as unnecessary, extra work. Most fruit now placed on local markets by growers is not graded thoroughly enough.

Whenever the opportunity has come up, I have tried to attend fruit growers' meetings and on such occasions I am frequently called upon to give my opinions on marketing. Just the other night I talked to a group of growers in an orchard community within 40 miles of Cleveland. The need of increasing fruit volumes being sold through every type of

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APRIL, 1939



Veteran of more than 30 fruit marketing seasons, K. B. Pocock, well-known Northern Ohio Food Terminal fruit broker, checks over telegram after interview by AMERICAN FRUIT GROWER.

## "BETTER SELLING"

By K. B. POCOCK

WE are in our thirtieth year of handling fruits as carlot brokers. And I can truthfully say that it is one of the toughest years we have had in moving a bumper crop. This time it's citrus. We can't kick a bit on the apple deal, or for that matter on the pear and cherry, although with all of these fruits we constantly face the bugaboo of overproduction.

Moving a citrus crop like we have this year is a real job, but the citrus interests are helping by careful and well-planned advertising programs. No two ways about it, there is a "battle royal" among the various fruits for a conspicuous place in nationwide consumption. But even more important to the fruit industry is the competition offered by other products. It makes an old fruit man "see red" when he thinks about the serious competition set up by synthetic products which are far inferior to fresh fruit when health-giving values are considered.

I sincerely realize that advertising and better packing have brought to the fruit industry a sounder recognition on the part of the housewife. Up to the past few years the citrus people have lead the way in fruit promotion, but so vital is advertising to the entire industry that leaders in the marketing of other fruits are now pushing their particular types. My experience has been such that I know

the importance of good fruit grading and packing. We handle carloads of apples from all parts of the country; citrus from Florida, Texas and California; cherries from California and the Northwest, and pears from the same regions. The better any of these fruits are packed, the easier they are to sell.

It is sometimes hard for those of us who are located far from production areas to know just what the answers are to problems facing the industry. But as I look at the situation now, it appears to me that marginal orchards will gradually disappear from the fruit production picture because of increased competition. We know that the marketing of this year's citrus crop, for instance, means that every fruit broker, commission man, dealer and retailer, not to mention the organizations of growers who market the fruit, must work to his utmost, using every conceivable effort if a reasonable degree of success is to result. And statisticians tell us that there are still hundreds of citrus trees not yet in bearing. It appears to me, therefore, that the marginal orchards and groves of any fruit will be forced out. This, coupled with even more consumer education, should better the situation.

Pears, this year, were probably our best fruit deal. They had a good (Continued on page 23)



## CHERRIES •

### FRUIT FLY COMMITTEE

With upwards of 1700 acres in trees, an average yearly production of 4,000,000 pounds, and a revenue amounting to \$200,000, cherry production in Lane County, Oregon, is "big business." But growers in this section find that their fruit production work isn't all a matter of just picking the fruit and pocketing the returns. Practically every year they must fight brown rot, leaf spot, thrips, and, worst of all, the cherry fruit fly. Leading growers say that the latter pest is their greatest enemy at present since the maggot of the fly shows up in the canned fruit, resulting in a decided unfavorable consumer reaction. Regardless of careful inspection work at the cherry canneries, some wormy cherries slip by unnoticed and turn up in the canned product.

To prevent ruination of their mar-

kets, energetic growers banded together last year to form the Cherry Fruit Fly Committee, with A. C. Berntzen as chairman. It was realized at the start that any plan of control of "Goons," the name given the pest by the committee, must include more than just their own county.

The committee met frequently, enlisting the aid of the State college specialists. A number of cherry growers were selected to give talks at local Grange meetings. The county agent was asked to prepare a mailing list of all cherry growers, even those with only a few trees. This list was later used to inform growers on timely bait spraying for the fruit fly.

Fortunately, Oregon's state horticultural law enforces spraying of fruit trees. Committee members contacted the Lane County court for additional funds to carry on the fruit spraying work under the state law. Money thus made available was used to employ additional deputy inspectors to check growers to see that spraying was done properly and at the right time. So complete was this coverage

Oregon production of fine cherries such as those shown at left is constantly threatened by attacks of the cherry fruit fly. Cherry growers have banded together against the fly.

that anyone who was not equipped to do the work himself, could contact the county agent or fruit inspector as these men had lists of spray rig operators who would apply bait sprays at a specified amount per tree, depending on the number of trees sprayed.

Success of this project is shown by the comparative amounts of bait spray sold after the committee started its work. In 1937 the Eugene Fruit Growers Association sold 2000 gallons of molasses and lead to make 40,000 gallons of spray. Last year these figures were boosted to 4233 gallons of molasses and lead, which were used to make 84,466 gallons of spray, or an increase of 44,466 gallons of spray. With this proof in hand and because last year's more thorough job of spraying resulted in good control with few wormy cherries, growers have become enthusiastic as to the possibility of a concerted drive against one of their fruit pests. Wormy fruit was mostly in the late varieties.

But one question still remains. Last year was a dry season. Growers are now wondering if they will be able to obtain as good control in a wet year. To settle this question, the committee is already at work. They have solicited entomologists at Oregon State College to try out various sprays for the purpose of learning which is most effective under changing weather conditions.

Growers in Lane County are assured that the fruit fly work will continue this year since the Lane County Tax Payers meeting voted \$500 for cherry fruit fly control in 1939. Other sections of the State which are yearly suffering a loss because of the fruit fly, have joined with the Lane County growers and are attempting to obtain funds for fruit fly control work from the State authorities.

## CITRUS •

### BROADCAST GRATITUDE

From a chain of radio stations operated by the Mutual Broadcasting System in California, weather specialist Floyd D. Young presented nightly frost broadcasts to citrus growers for a three-month period. The only compensation received by these radio stations is the good will of the fruit growers.

To show their appreciation for this service, hundreds of grove owners during the past fortnight have sent

(Continued on page 24)

## Avoid "Aphis Apples"

Use "Black Leaf 40" when the tips show green... add it to your standard sprays and cover trees thoroughly... a practice successful for twenty-nine years. Aphis control is profit insurance.

Use the time-tested "Black Leaf 40" "Combination Sprays," recommended to control Aphis, Bud-Moth, Scab and Chewing Insects.

"Black Leaf 40" is concentrated for economy, and easy to use... does not harm buds or foliage. In later sprays, "Black Leaf 40" kills Red-Bug, Leaf-hoppers and Codling Moth.

TOBACCO BY-PRODUCTS & CHEMICAL CORP., INCORPORATED  
LOUISVILLE, KENTUCKY

Insist upon Genuine

# Black Leaf



# STATE NEWS

**CALIFORNIA**—The avocado, aristocrat of California's commercial specialty crops, is perhaps also the newest and most unique. Twenty years ago this fruit was a rarity in the gardens of the Southland; today it is commercially produced on more than 10,000 favored acres in southern California's coastal belt.

The Ahuacate, as the avocado is called in Mexico, is native to the mainland of tropical America. There in the forests and jungles, especially those of southern Mexico, are the countless trees from which the commercial varieties grown in California have been selected. The avocado was first definitely established in California in 1871.

In addition to establishing the industry with the very best varieties, another factor contributed to its remarkable development. This was the organization and subsequent activity of the California Avocado Association. Since its inception in 1915, this organization has rendered invaluable service in pooling the interests and efforts of growers striving to realize the early dream of a sound and stable avocado industry.

Avocado production steadily increased during the early years until in 1924 the need for a marketing organization was evident. Solution to this new problem came when the California Avocado Association sponsored a co-operative marketing agency called the California Avocado Growers Exchange. In 1927, this name was changed to Calavo Growers of California, the present designation of the organization. Approximately two-thirds of the annual avocado crop is now handled by Calavo.

San Diego, Los Angeles, and Orange lead all other counties in the production of this fruit, which in California in 1937 totaled 5485 tons. Florida's production in the same year was 2100 tons, making the U. S. total 7585 tons. Although avocados may be had in California during every month of the year, heaviest shipments are made during winter and spring months.



**NEW YORK**—An experiment by a Warwick fruit grower last year revealed the possibilities of salvaging thousands of low-grade apples each year for applesauce and cider.

Gilbert Ryerson, apple specialist, installed a refrigerating system in one of his apple storehouses. He found that not only could he put his good apples directly in storage, but also save for applesauce and cider thousands of low-grade apples that otherwise would rot before they could be transported to market or city storage.

Refrigeration was responsible for the comparative "holiday" at the Ryerson farm at harvest time. Besides saving labor and time, the system showed a saving of 14 cents per bushel per season over city storage. The Ryerson cold storage has a capacity of 15,000 bushels.

**FLORIDA**—Seemingly, insects and diseases aren't going to have a chance in citrus groves this year. Leastwise, that is what one would imply upon learning that thousands of copies of the new spray and dust schedule compiled by the better fruit department of the Florida Citrus Commission at Lakeland have been distributed to citrus growers.

"The schedule represents a concise accumulation of the best knowledge available today on dusting and spraying," according to W. W. Hubbell, better fruit department head. "A distinct increase in quality of fruit should follow such widespread distribution, providing of course growers follow the suggestions it contains."



**MARYLAND**—Before Magistrate Harry Fine in Baltimore appeared Mrs. Mary Selden, grocery woman. Mrs. Selden had been charged with selling four cents' worth of onions in violation of a Sunday law prohibiting the sale of vegetables—but not of fruit.

Magistrate Fine's ruling that the onion is a fruit and not a vegetable freed Mrs. Selden of the "blue law" charge. "It is a matter of individual taste," said Magistrate Fine, "whether or not onions may be prepared as a dessert."

**TENNESSEE**—A recent act of the Tennessee Legislature requires that all strawberries shipped from this State in closed containers be graded and marked approximately as required by Federal standard grades. Exceptions are made for canning, quick freezing, and other processed berries.

"When I have to beg the Memphis fruit dealers to handle my finest peaches," says C. E. Heckle, Jr., of Forest Hill, "they beg me for nectarines." To prove whether or not this is just part of the old game of crying for what you haven't got, Heckle has made a modest planting of some of the new nectarines introduced by the Geneva, N. Y. station.

Charles C. Cardwell, an orchardist near McMinnville, has a single apricot tree, but it IS A TREE and he's proud of it. It was planted in 1924 and measures 44½ inches at its smallest trunk circumference. It has an estimated height and spread of 30 to 35 feet, and has never failed to set some fruit. It has borne five crops of between 10 and 15 bushels and, because of the scarcity of this fruit on the local market, it was sold to the merchants in quart tins at 10 cents a quart. The variety is either Moore Park or Stella.—A. N. PRATT, State Horticulturist, Nashville.

**WISCONSIN**—It is easy to injure strawberry plants. Handling them in either cold or hot, dry winds or sunshine, at any stage of growth, is a hazard, says H. H. Harris, of Warrens. But he believes there is more danger later than early in the season.

Harris likes to set strawberry plants early in the spring, as soon as the ground is in good condition to work and before much new growth of leaves or roots is made. Frequent-

ly the soil gets so dry later that the new feeder roots cannot get sufficient moisture and the plant eventually dies.

Strawberry plants on the Harris plantation are set with a spade, generally two persons working together, one using the spade and the other placing the plants. The center of the edge of the spade is placed on the mark of the row just where the plant is to stand, the blade is pressed into the ground its full length at such angle that when the handle is brought to an upright position there is an opening in which the plant is placed, and the roots are spread out fan-shaped while the spade is still in the ground. Then the plant is placed firmly against the slanting side of the opening at the same depth as it grew in the nursery. The spade is removed and the soil pressed against the plant with the foot.

The crown root of most strawberry plants is crooked—forming a heel—and if this heel is pressed against the slant in the opening the plant will stand more erect.—H. J. RAHMLOW, Sec'y, Madison.

**NEW JERSEY**—Varieties of apples of which there were more trees planted in New Jersey orchards than removed during the period from January 1, 1935, to June, 1937, were McIntosh, Stayman, Rome, and Delicious, according to data in State Department of Agriculture Circular 296.

Leading varieties of apples in New Jersey in 1937, according to the percentage of trees of one variety as compared to all, as recorded in the circular, were as follows: Stayman, 17.3; Rome, 10.5; Delicious, 10.2; Wealthy, 8.3; McIntosh, 6.4; Starr, 4.4; Grimes, 4.4; Mammoth Black Twig (Paragon), 3.3; Golden Delicious, Winesap, and Baldwin, each 3 per cent.

Varieties of apples of which large numbers of trees were pulled out from 1935 to 1937 were Williams, Starr, Yellow Transparent, Wealthy, Winesap, and Ben Davis.—A. J. FARLEY, Sec'y, New Brunswick.



**NORTH CAROLINA**—Normally, strawberries are harvested in North Carolina during April, but Dr. Charles Dearing, assistant director of the State Department of Agriculture test farm at Willard, has been picking ripe strawberries from three one-tenth acre beds since February 7!

Dr. Dearing, who has been conducting experiments with the winter growing of berries, predicts that North Carolina growers soon will be able to harvest almost throughout the winter, berries grown out-of-doors. The plants in the test plots are protected by a heavy canvas blanket during the night.

Br'er Rabbit in Uncle Remus' tales is the embodiment of wit and intelligent craftiness, according to Webster's dictionary. No less witty and crafty are the rabbits who feasted upon peach trees in one of Hawley Poole's orchards in Moore County. Out of 4000 trees two years old, not over 500 escaped damage from rabbits which ate the bark entirely off around the trunks of the trees. A mere 200 trees were left without damage.

Rewards for conscientious and intelligent effort have been literally heaped upon Adler Byrd of Yancy County. Byrd reports that from a small orchard of 12 trees he sold \$50 worth

Watch for  
JUNE DIRECTORY  
Issue

of cherries last season. This in addition to cherries consumed at home. Reason for this excellent return is due to keeping the trees properly pruned and sprayed. Other trees in the community have died for lack of this attention.

**MINNESOTA**—Hurrah! This looks like another easy winter for raspberry canes. Leathem, Taylor, and Marcy canes cut near St. Paul, Minn., early in March and placed in water in a warm room developed good growth to the tips.

The supply of new bulletins and circulars often becomes exhausted within one to two years after date of issue, especially if on popular subjects. The following popular publications are still available, in limited quantity, at the Agricultural Experiment Station, University Farm, St. Paul: Bulletin 297, "Grape Growing in Minnesota;" Special Bulletin 72, "Strawberry Growing in Minnesota;" Special Bulletin 184, "Packing Minnesota Fruits for Market;" Mimeographed Circular HN-95, "Fruits and Vegetables for the Locker Storage."

Several of the new conditioning rooms for berries are being constructed this spring by growers. A room of this type provides for controlled ice refrigeration, circulation of air by an electric fan, and provision to greatly increase the natural carbon dioxide content of the air in the room. Refrigeration is controlled by a special damper so that the berries are not cooled below 58 to 60 degrees F. This provides an ideal temperature and humidity for the temporary storage of berries. The added carbon dioxide replaces much of the oxygen in the room and thus slows down the respiration of the fruit. The result is that the berries retain their freshness and bright appearance for many hours longer than usual, and they do not deteriorate as quickly when removed from the room as do berries removed from ordinary low temperature refrigeration. The use of this type of room has been developed as a result of experimental work started in 1936 at the University of Minnesota. The process was used commercially to a small extent in 1937 and to a much larger extent in 1938.—J. D. WINTER, Sec'y, Mound.

**KANSAS**—Nearly 8,000,000 trees, heeled in for the winter at Great Bend, will be used in the shelter belt planting in western Kansas.

Due to lack of moisture and excessive summer heat in recent years, fruit and forest tree loss in Kansas has been tremendous. Since the past season has been more nearly normal, and with spring rains, there promises to be an unprecedented planting of fruit, forest, and ornamental trees. Kansas nurserymen are prepared to take care of any increase in demand.—GEO. W. KINKEAD, Topeka.

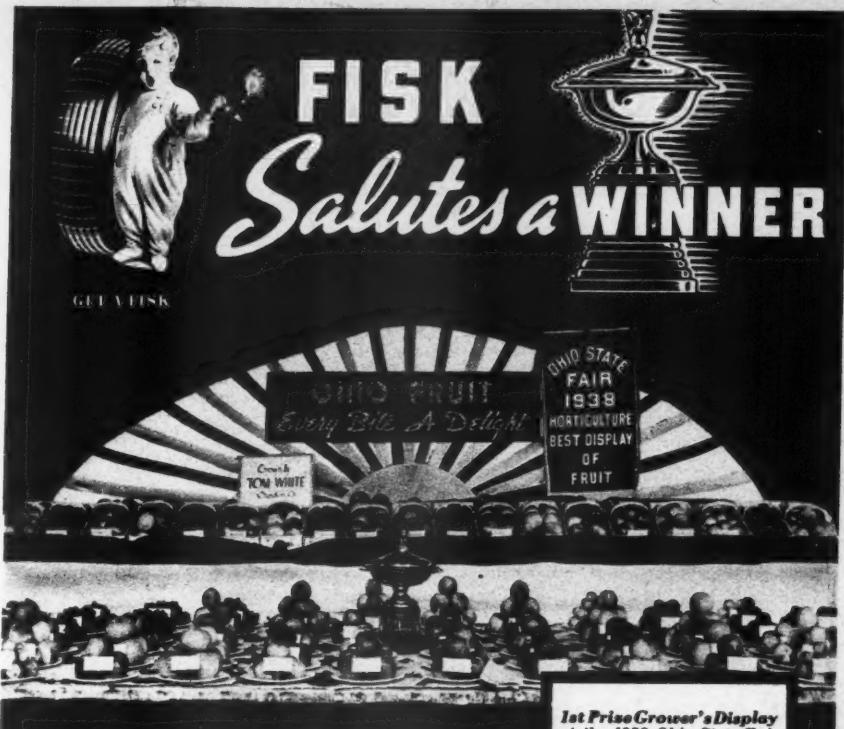
**OHIO**—The State Horticultural Society feels keenly the loss of Senator W. W. Farnsworth of Waterville. His splendid record of service for the organization, of which he was an honorary member, challenges the test of time.

At the society's recent annual meeting, the committee on varieties went on record as recommending Miami apple to growers who find Stark a profitable variety and wish to grow a strain with more color. Battle and Franklin apples were suggested for trial, as was Cope's Seedless pear.

In peaches Marigold was recommended for trial as a very early yellow coming ahead of Golden Jubilee, and Vedette was added to the midseason yellow freestone varieties. Early Richmond cherry was placed back on the list for those wishing cherries for earliest fresh market.

In small fruits Potomac purple raspberry was removed from the list because of crown gall susceptibility and low quality. Sodus was recommended as the preferred purple, with Marion for trial. Boysenberries and Youngberries were recommended for trial with winter protection.

Premier continues as the outstanding straw-  
(Continued on page 22)



## Year after year QUALITY PRODUCTS follow QUALITY PRODUCTION in FRUIT...or TIRES

"CONSISTENTLY GOOD" is a priceless reputation for any product. In fruit . . . or tires . . . quality that repeats is the reward for expert and painstaking workmanship applied to Nature's raw materials.

FISK TIRES have been *consistently good* for 40 years. They give you *more miles and safer miles* for every dollar, because they are *cooler* running at all speeds. They contain only genuine Anti-Friction cord . . . in *EVERY* ply! This vital improvement, together with other exclusive Fisk features, bring you one of the most important driving safeguards in modern tire history: *PLUS-Protection* in that ever-dangerous *Blow-Out Zone*. Your nearby Fisk Dealer will gladly demonstrate these extra-value improvements to you.

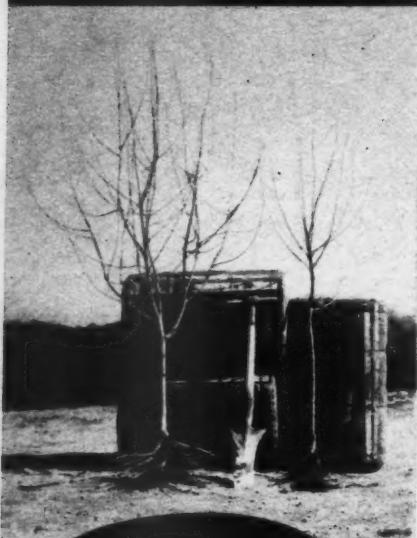
THE FISK TIRE COMPANY, INC.  
Chicopee Falls, Mass.

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# FISK

PLUS-Protection IN THE BLOW-OUT ZONE

# FRUIT TREES GROW BETTER WHEN PLANTED WITH PIC PEAT MOSS



This EXTRA GROWTH  
for only a few pennies/  
per tree!

Look at the two apple trees pictured above. Both are the same age . . . both were planted at the same time (spring 1935) at a leading State Agricultural Experiment Station. The only difference in planting treatment was the addition of a 12-quart pail of moistened PIC Peat Moss to the fill-back of the tree on the left—but what a difference in growing results.

Fruit growers everywhere are finding PIC Peat Moss a boon to successful growing of apple, peach, plum and cherry trees. When mixed with the soil, it provides an ideal environment for root development and tree growth.

**FREE**



Let us tell you more about this amazing product and how it can help you get better tree growth. Mail coupon below for full details and a free copy of our bulletin on "Growing Trees."

**PIC PEAT MOSS**  
*Emblem Protected*

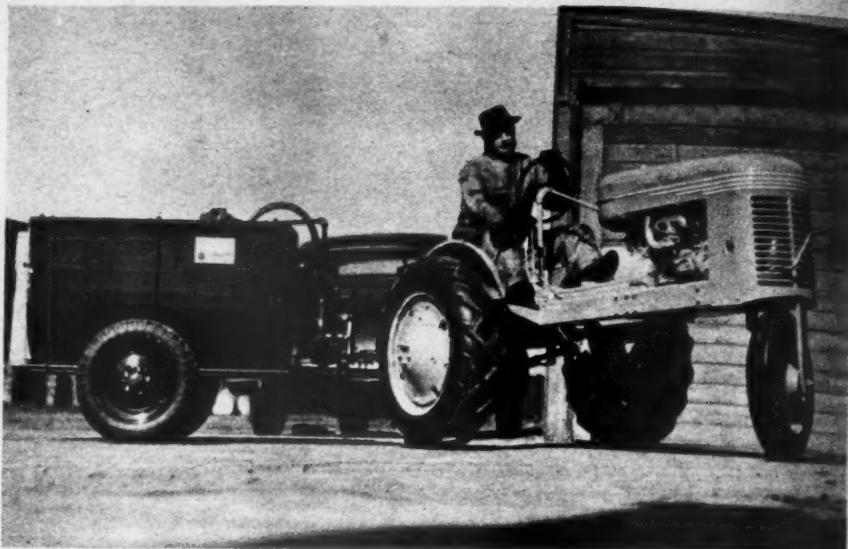
PEAT INSTITUTE OF AMERICA  
Div. Peat Import Corporation  
155 John Street, New York, N.Y.

AFG-4

Please send me full information on the use  
of Peat Moss in planting trees.

Name  LIBRARY  
Address  MOSCOW IDAHO

City  State



"The General," Cletrac's new wheel tractor is tried out with power take-off spray rig.

## CLETRAC ANNOUNCES NEW TRACTORS



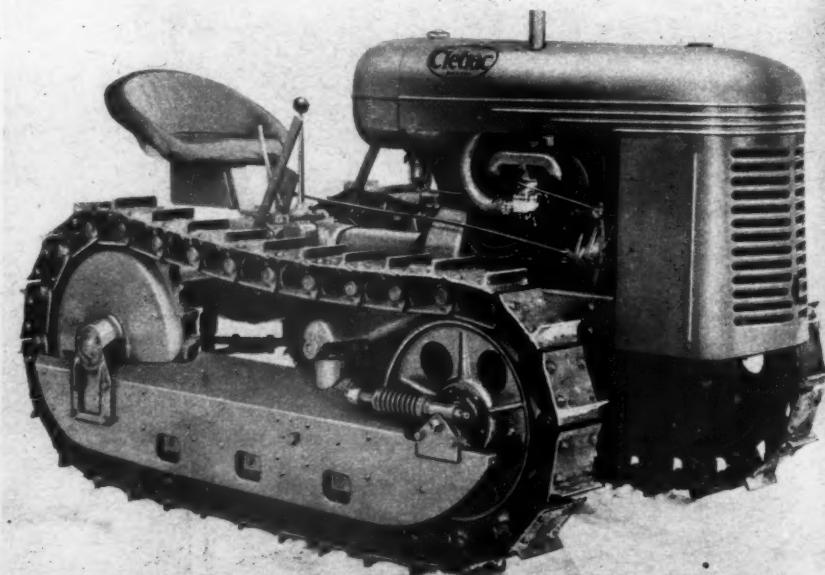
Above—Sales manager, William Abildgaard, explains new models to Cletrac dealers. Below—The new Cletrac orchard crawler tractor, has 42-in. width.

IMPLEMENT dealers from 41 states flocked to Cleveland, Ohio, early last month to see two new Cletracs announced by the Cleveland Tractor Company. One of the new models is a rubber-tired, wheeled, tricycle type, selling for \$575 and the other a lighter, faster crawler listed at \$875.

New implements to work harmoniously with these new tractors were also exhibited. In addressing more than 700 dealers, William Abildgaard, Cletrac general sales manager, said, "These new models satisfy the needs of farmers who want lighter, faster, and lower-priced machines. Each tractor with its implement has been designed to do a definite farm task in a time and labor-saving way."

For fruit growers, Cletrac demonstrated spraying outfits composed of the new Cletrac models and 200-gallon Bean spray rigs using power from the tractor take-offs. These small, high-pressure spraying units at a new low price will solve many a perplexing spraying problem.

Cletrac's new wheel tractor has been named "The General." It is powered with a high-compression, four cylinder engine. The new crawler type is made in 42-inch width for fruit growers and in a 68-inch row-crop size.



## SULPHUR SPRAYS

(Continued from page 7)

For example, Dutton of Michigan has shown that the rate of trunk growth of lime-sulphur sprayed trees may be definitely retarded as compared with Bordeaux sprayed trees; Howlett and May in Ohio show increased fruit drop due to lime-sulphur when no injury was apparent to the foliage; and Mills of New York and Young of Ohio report 13 to 30 per cent reductions in leaf growth of apples and cherries due to lime-sulphur as compared with the flotation paste and the wettable sulphurs. This is undoubtedly significant when we recall the work of Drs. J. R. Magness and A. J. Heinicke relative to the importance of leaf area per fruit and leaf efficiency as they are closely correlated with the number of fruit buds differentiated in any one year for the crop the following year.

Recent studies of the influence of sprays on photosynthesis, or food manufacture, by apple leaves in New York, Ohio, and Rhode Island show that the rate of food manufacture may be retarded appreciably by applications of liquid lime-sulphur even though there is no apparent injury to the leaf. The type of equipment now in use at Ohio State University for making these studies of the influence of sprays on photosynthesis was designed in part after an apparatus constructed by Heinicke and Hoffman at Cornell. With such equipment it is possible to detect accurately to a rather fine degree the effects of sprays on foliage.

Photosynthesis studies by Hoffman in New York definitely show that the efficiency of apple leaves per unit area may be reduced 10 to 100 per cent by lime-sulphur 1-40. In Ohio we have found that not only a 1-40 concentration of this spray may reduce leaf activity, but solutions at strengths of 1-80, 1-100, or even 1-125 may cause equally as severe reductions, especially when the temperature reaches 90 degrees F. These reductions have persisted for three to seven days or longer with no apparent external injuries to the leaves.

Tests with mechanical mixtures of sulphurs, however, show that these forms of sulphur have much less effect on the fundamental activity of the leaf. Christopher of Rhode Island found 10 to 20 per cent reductions in photosynthesis due to flotation paste 1-55; Heinicke at Cornell reports five to 10 per cent reductions for a period of a week after dusting with a straight sulphur dust; while results in Ohio thus far indi-

(Continued on page 19)

APRIL, 1939



• THE TRUCK OF VALUE •

## with Astonishing Gas Savings!

You get more pulling power with a GMC—and now 1939 owner reports prove that GMC's are breaking gas economy records right and left! Says one: "Almost 25% reduction in fuel consumed over other trucks used on the same routes." Says another: "We are now getting 10% to 20% more mileage with our new GMC." Measured fuel savings up to 40% are on record! Pull your loads easier—at less cost—with a GMC!

Our own YMCA Time Payment Plan assures you of lowest available rates

**NOW—Lowest Prices in GMC History!**

**GMC TRUCKS  
TRAILERS - DIESELS  
CAPACITIES 1/2 TO 15 TONS**



*Safeguard*  
YOUR  
ORCHARD  
PROFITS

**GOOD** management of orchard soils supplies enough of all necessary plant foods to insure vigorous tree growth, high yields of high-grade fruit, and maximum growth of cover crops. Liberal applications of a properly balanced **COMPLETE** fertilizer will help put and keep your orchard on a profitable basis.

**Consult your county agent or experiment station about the needs of your soils. See your fertilizer dealer about complete fertilizers for your orchards. You will be surprised how little extra it costs to apply enough of all of the necessary plant foods.**

If we can help you with your fertilizing problems, please write us.

**American Potash Institute, Inc.**  
Investment Bldg. Washington, D. C.



## "BETTER TELLING"

(Continued from page 8)

fruit harvest can be followed from locality to locality so that delivery to market is accomplished with a new timeliness. So important is the truck that today 30 per cent of all the fruits and vegetables shipped in this country are handled by motor truck.

Fruit and vegetable dealers, commission men, and brokers operating on the Northern Ohio Food Terminal realize the need of increasing public use of produce to the extent that we have applied to authorities for permission to build and operate a radio station. If approved this station will be used to reach the housewives of the region served by the terminal, to keep them informed as to just which fresh fruits and vegetables are available every day in the year, and how they can use these healthful foods in planning their meals.

## Coming JUNE DIRECTORY ISSUE

## "BETTER GRADING"

(Continued from page 9)

outlet has become so important to me that during my talk to this group I told them frankly that I thought they should pay at least two cents a bushel for advertising. I became so involved and intent on my purpose of getting over to these men the fact that their market has slipped, that I told them people just weren't eating apples and peaches like they used to. When I finished, one of the growers asked me just why people are not eating apples as they did a few years ago. After I told him of the strenuous competition set up among the fruits for even a small portion of the money spent for food by housewives, I believe he was convinced of the need for advertising.

I know that the greatest change we have been forced to observe, much to our dislike, is the shrinkage in apple volume. This general decline in volume has unquestionably come about through a change in consumer demand. If it is ever to be regained, apple growers must unite to swing the change the other way. I am sure that every commission man, broker, or dealer handling apples with whom I am acquainted is ready to do his part in co-operating with growers to increase apple sales.

As far as the consumer package is concerned, I don't believe we are quite

(Continued on page 23)

# READ THESE LETTERS

## Better Prices After Using BASI-COP

Gentlemen:—

Our cherry foliage this past season was the finest that we have ever seen. We used S-W BASI-COP applied exactly as the Michigan State College spray schedule recommended. Not only was our foliage in the finest of condition, but we received an extra premium of 35 cents per 16-quart crate on the fresh fruit market. We received this extra premium because the fruit was not stained. If we had used Lime Sulphur, this would have been impossible.

The strength used was 2½ pounds of BASI-COP, 5 pounds of lime, to 100 gallons of water. Our material cost about 39 cents per 100 gallons. **THUS THE EXTRA PREMIUM RECEIVED FOR THE CHERRIES PAID FOR THE SPRAY MATERIAL SEVERAL TIMES OVER.**

We made three pre-harvest and one after-harvest spray applications. At the South Haven orchards we had 38,000 pounds of cherries. Next year we will again use S-W BASI-COP 100 per cent.

(Signed) F. M. Barden & Sons,  
South View Orchards,  
South Haven, Mich.

## Foliage In Perfect Condition

Gentlemen:—

I used S-W BASI-COP on my cherries last year, making four applications before harvest. The strength used was 3-8-100.

The foliage was in perfect condition until late in September AND THE LEAVES WERE REMOVED ONLY BY FROST. This year without any question I am going to use S-W BASI-COP 100 per cent.

(Signed) Percy Anderson,  
Anderson Orchard,  
Fremont, Mich.

## Results Warrant Continued Use

Gentlemen:—

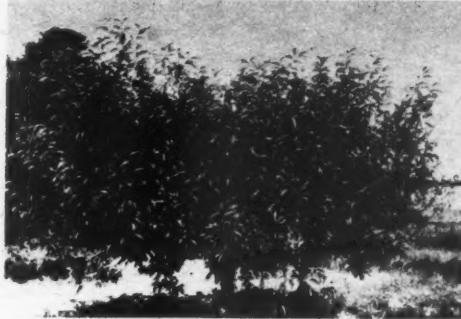
The results shown in our orchards with S-W BASI-COP warrant the use of this material in a large part or all of the orchards the coming year.

(Signed) O. R. McClary,  
McClary Orchards,  
Empire, Mich.



# BIGGER BETTER CHERRIES BASI-COP

*No Dwarfing of the Fruit or Injury to Foliage*



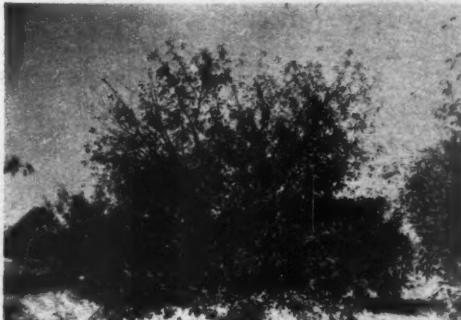
Basi-Cop, 3-8-100, gave complete control of leaf-spot. No injury to vigorous, healthy foliage.



Sprayed with liquid lime sulfur. Extreme defoliation is result of leaf-spot infection.



Copper oxychloride compound spray on these trees caused defoliation due to serious copper injury.



Bordeaux spray program on these trees also resulted in serious copper injury to foliage, as shown.

## The Photographs Show Why BASI-COP Is Best

Season after season use of S-W BASI-COP in leading cherry orchards proves it to be the best of all the "fixed" copper compounds. The above photographs were taken in the experimental cherry orchard during tests conducted by the Michigan State Experiment Station under the Sherwin-Williams Research Fellowship. They show why growers find BASI-COP BETTER and SAFER than Bordeaux and Lime Sulphur or copper oxychloride compounds in the control of cherry leaf-spot. BASI-COP is neutral and insoluble and will not dwarf cherries, nor cause yellowing, dwarfing or dropping of the leaves, as the photograph, top left, proves. ECONOMICAL, too, because from 2½ to 3 lbs. of BASI-COP with 8 lbs. of lime to 100 gallons of water will give most satisfactory results.

Remember, vigorous, healthy leaves retained late in the season insure a better crop of cherries for the following year.

Write for FREE Folder

**THE SHERWIN-WILLIAMS CO.**

Insecticide Department

101 Prospect Ave.

Cleveland, Ohio

# SHERWIN-WILLIAMS SPRAY AND DUST MATERIALS

# How's this for ECONOMY?

1 PART STICKER TO  
12,800 PARTS SPRAY



Apple from a tree sprayed with 4-4-100 Bordeaux Mixture, 3 lbs. lead arsenate.



Sprayed with same mixture plus 3 ounces GRASSELLI Spreader-Sticker. Note the more uniform coverage.

• GRASSELLI Spreader-Sticker is so highly concentrated that only 1 oz. per 100 gallons of lead arsenate spray generally is ample to produce uniform and persistent coverage.

• The sticking agent in GRASSELLI Spreader-Sticker is a plastic substance that does not become brittle and crack or peel when dry. Greater resistance to weathering is obtained. However, it is easily removed by warm water and commonly used fruit washing agents.

• GRASSELLI Spreader-Sticker disperses easily and quickly in cold water. It is compatible with nearly every type of hard water. See your dealer about this unusual product.

E. I. DU PONT DE NEMOURS & CO., INC.  
GRASSELLI CHEMICALS DEPARTMENT  
Wilmington, Delaware

**KINKADE GARDEN TRACTOR**  
and Power Lawnmower  
A Practical, Power Plow and Cultivator  
for Gardeners, Suburbanites, Florists,  
Truckers, Nurserymen, Fruit Growers  
Low Prices - Easy Terms  
American Farm Machine Co.  
1166 Third Av. S.E. Minneapolis, Minn.

UNITED'S B. B. (BLOCK BAKED)  
CORKBOARD INSULATION

Assures maximum insulation efficiency at minimum cost. Moisture resistant, compact, light weight, sanitary, structurally strong, flexible.

Write for particulars.

**UNITED**  
CORK COMPANIES  
WEST KEARNY, N. J.

Literature  
on request

## RALLY TO NAI AT MARTINSBURG MEETING

ON a sunny spring afternoon in 1935, a group of farsighted apple boosters met in Fort Wayne, Ind., to form the National Apple Institute. These men realized that the decline of apple popularity had to be stopped if apples were to retain their rightful place in the food consumption of the nation.

Progress of the new organization was slow. The officers faced the financial problem in every effort they proposed. But the officers persisted on the smallest of budgets, the money often coming from their own pockets. These men today have the satisfaction of knowing that the organization they instigated a short five years ago now rates as the central body for all apple sections in the advertising struggle to strengthen consumer apple acceptance.

NAI's fifth annual meeting drew to Martinsburg, W. Va., middle of last month more than 75 of the nation's foremost apple promoters. At the meeting they discussed a variety of topics, all having to do with more efficient apple promotion, with ways and means of bettering the apple market for the benefit of all growers. A resolution for continued and increased support of NAI by the regional groups was unanimously approved by those in attendance. Last year's slate of officers was re-elected. They are Kirk



NAI's genial president, Kirk L. Keller, beams his optimism while talking about the institute. He's holding a copy of "The Apple Bowl," a publication of NAI.

L. Keller, president; John Lyman, vice-president; Dr. H. E. Barnard, secretary; and W. B. Baughman, treasurer.



New 16-page  
Cold Storage  
Manual tells  
why, how and  
where to install  
PALCO WOOL.

**FREE**



# W I S E INSULATION BUYERS

If interested in preserving low temperatures *economically*, investigate PALCO WOOL, made from durable, fire retardant Redwood bark. Non-settling—odor and vermin proof—repels moisture. Efficiency .255 B. t. u. (Peebles).

**PALCO**  
INSULATION  
**WOOL**

THE PACIFIC LUMBER COMPANY  
SAN FRANCISCO - CHICAGO - LOS ANGELES - NEW YORK

## SULPHUR SPRAYS

(Continued from page 15)

cate little effect of wettable and flotation sulphurs on the photosynthetic process. Dry lime-sulphur likewise seems to have less effect on photosynthesis than liquid lime-sulphur but, on the average, somewhat more effect than the wettable forms.

Just how liquid lime-sulphur may reduce leaf activity to the extent that it does has not been answered to any great satisfaction. Suggestions have been made that the presence of the spray film on a leaf may cause the "breathing pores" to close and obstruct the passage of the gaseous raw material used in photosynthesis—carbon dioxide. Or there may be a destruction of the internal cells and the green coloring within the leaf tissues. It is definitely known that an abundance of green coloring, or chlorophyll, in the leaves is highly essential for rapid and efficient food production.

That the above relative effects on photosynthesis of the elemental sulphurs and liquid lime-sulphur may be reflected in tree yield from one year to another has been demonstrated by Dr. Mills of the New York Experiment Station. With 188 McIntosh trees over a period of four years, 1933-37, Dr. Mills found that those trees which received lime-sulphur through the calyx sprays and wettable sulphurs thereafter showed an increase in yield of 38 bushels per acre per year over the yield of trees which were sprayed with straight lime-sulphur through the season. On the other hand, trees which were sprayed with only wettable sulphurs (no lime-sulphur) yielded around 100 bushels per acre per year of fruit more than the liquid lime-sulphur sprayed trees.

Although occasional rough observations have been made on the relationship between lime-sulphur spraying and winter injury, a rather specific instance has been cited by Dr. G. F. Potter of the New Hampshire Experiment Station. Trees in the station orchards which had been sprayed with liquid lime-sulphur over a period of years showed, to the tree row, definitely greater winter injury after the cold winter of 1933-34 than trees receiving other fungicides. As far as their records showed, the trees in each plot had received identical treatment with exception of the spray materials. Such injury was probably caused by lack of proper storage of carbohydrates during the summer period and proper maturity of the tissues as a result of poor foliage condition.

While all this information on the detrimental effects of liquid lime-sulphur on fruit trees might suggest

(Continued on page 21)

**"WHEN OTHER DEALERS  
SOLICIT ME... MY FIGURES  
STOP THEIR TALK!"**

—Declares Clark Mellenbruck,  
Hidalgo County,  
Texas

"After experimenting with various kinds of tractors for several years," states Mr. Mellenbruck, "I bought my first 'Caterpillar' track-type Tractor. Since then there has been no other make on the place.

"I now have 6 of them, including a Diesel D2 and D4. With but little help from the gasoline models, these Diesels care for my own 200 acres of citrus and 300 acres on contract.

"My Diesel D2 will work 1000 hours on a fuel bill of only \$65.00. When tractor salesmen come around and try to jar me loose from 'Caterpillar' I just show them what it costs me to do a day's work with a 'Caterpillar' Diesel, and that's the end of that."

### Lowest tractor operating costs

available—yes! But that isn't half the story. For the "Caterpillar" Diesel Tractor's performance stands out as decisively as its economy! It has the all-weather traction to operate a fully-loaded power take-off sprayer in muddy orchard—or to pull a heavy-duty disk at full angle in ropy, slippery cover crop! It has built into it what no other make of tractor has—"Caterpillar's" 34 progressive years of track-type tractor experience!

Convenient, helpful terms available on any "Caterpillar" Product you buy.

# CATERPILLAR

TRACTOR CO. • PEORIA, ILLINOIS

DIESEL ENGINES

TRACK-TYPE TRACTORS

TERRACERS

CATERPILLAR TRACTOR CO., Dept. A-94, Peoria, Illinois

Gentlemen:  I want to consider buying a "Caterpillar" track-type Tractor.

Size of orchard..... Power now used.....

I need:  3-4 plow Diesel D2  3-4 plow R2  
(Distillate or gasoline)

4-5 plow Diesel D4  I desire a demonstration.

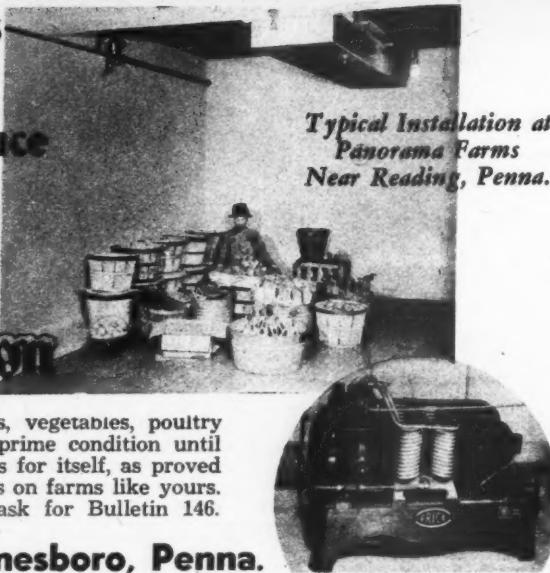
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**FRICK CO., Waynesboro, Penna.**



**A. P. S.**

(Continued from page 4)

dissemination of the material and ideas among the fruit breeders themselves. The conference was a very stimulating and profitable one.

**SPRAY RESIDUE**

In this department in the February issue of AMERICAN FRUIT GROWER, the report of the Spray Residue Committee was presented. This report was read at the annual convention at Chattanooga, Tenn., and because it was a decidedly important report, attention is again directed to it.

Certain producers' groups in the apple industry have recently taken occasion to voice their disapproval and to protest against the several consumers' agencies which have repeatedly stigmatized apples and pears by their insinuations that these fruits carried poisons which were detrimental to public health. It has been pointed out that such insinuations have done a tremendous amount of damage to the apple industry because of their influence in persuading housewives to avoid these two fruits. The apple industry is arming itself with new facts with which to combat these insidious publicity mongers.

## Protect Your Fruit Crop with HAIL INSURANCE



Hail strikes quickly—without warning. No fruit grower is altogether safe. Why risk losing your crop when these sound Capital Stock Insurance companies are ready to guarantee you indemnity for loss?

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The sugars and carbohydrates that build the tree and the fruit are manufactured in the leaves. **Domestic SULPHATE OF AMMONIA**, applied now, aids in the rapid production of the large, efficient leaf area needed ... to size the fruit and give it marketable quality ... to encourage an extensive root system ... and to develop terminal growth and fruit buds for the following crop. **Domestic SULPHATE OF AMMONIA**, made in the United States, is low in cost and rich in nitrogen—20.5% guaranteed—all soluble, all available. It is always dependable ... clean ... easy to handle ... easy to apply. Tell your fertilizer man you want **Domestic SULPHATE OF AMMONIA**.

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**Domestic SULPHATE of AMMONIA**

## SULPHUR SPRAYS

(Continued from page 19)

that it be eliminated entirely from the spray schedule, we should not forget that it takes lime-sulphur to burn out scab once it has entered the leaf or fruit tissues. The elemental sulphurs are not efficient in this respect but do serve well as a preventive for scab invasions provided they have been properly timed. Dry lime-sulphur holds a position between these two sprays. In general, wet-table and flotation sulphurs are a little more expensive than liquid lime-sulphur and somewhat more difficult to apply. But as Dr. Piersottorff of the Ohio station recently said, "It is more profitable to have a crop of fine finish with five to 10 per cent scab than a crop 98 per cent clean but with poor color and finish, accompanied by damaged foliage."

It might be mentioned here that many of the growers in Delaware, the Hudson Valley of New York, and other neighboring localities have discontinued lime-sulphur as a spray. A good percentage of the growers in the Midwest states have cancelled it from their schedules after the prebloom sprays, and for the prebloom sprays are diluting it to one to one and one-half gallons or less to the 100 gallons of water.

Whether in the future liquid lime-sulphur will be used less and less is not certain. However, such may occur in view of the present setup of relatively accurate and efficient mail and radio service, together with the recent developments in greater capacity and efficiency of spray machinery. With the machinery today, it is possible to put on 20 gallons per tree of the spray in the form of a fine mist at a pressure of from 300 to 600 pounds where formerly around five gallons were applied in the form of a coarse spray at 150 pounds pressure or lower. In other words, we can apply the same amount or more of sulphur in a non-caustic form which is distributed evenly over the tree, as compared with the older methods of sprinkling here and there with the highly caustic sprays that russeted the fruit and burned the foliage.

In conclusion, it might be mentioned that if liquid lime-sulphur should be cut from the calendars and replaced entirely by elemental sulphurs, it would be well to keep in mind a statement recently made by an Ohio grower, "As far as I am concerned, I intend always to keep a drum of liquid lime-sulphur in the back of my shed in case I should get caught with a bad case of scab. That's one spray we can depend on to burn it out." This is not a bad suggestion.

APRIL, 1939

# Let a FORD V-8 TRUCK help you get your work done



DEPENDABLE, fast-moving Ford V-8 Truck power will help make your farming operations more profitable.

Check this statement with an "on-the-job" test. Arrange with your Ford dealer to try a Ford V-8 Truck on your own farm, doing your own work.

As you use this truck, you'll realize that here is dependable, modern farm power. You'll say to yourself, "That's the reason why there are more Ford V-8 Trucks in use today than any other make."

Take particular note of how much work a V-type eight-cylinder truck engine can do on a little gas. And when you start off with a heavy load in tough going, you will be impressed by its power and smoothness.

Here is a piece of farm equipment that will be glad to work for you the year round, in the field and out.

## 1939 FORD V-8 TRUCKS

FORD MOTOR COMPANY, BUILDERS OF FORD V-8 AND MERCURY CARS,  
FORD TRUCKS, COMMERCIAL CARS, STATION WAGONS AND TRANSIT BUSES.

# APPLE BILL says:

*"When 'O. B.' hits 'em . . .  
it's curtains!"*



**ORCHARD\* BRAND ARSENATE OF LEAD**, because of unique improvements in its physical properties, has established a new high standard of efficiency in codling moth control. These new properties provide a more uniform and more thorough coverage on fruit and foliage . . . reducing worm injury to a new low.

Orchard Brand Arsenate of Lead is made in thin, flake-like particles. When deposited on fruit or foliage they tend to overlap, forming a continuous, smooth film—keeping "bare spots" down to a minimum.

Because of this improved covering ability, Orchard Brand Arsenate of Lead gives a high degree of protection . . . and higher "Grade A" packs. Write to us or ask your nearest Orchard Brand dealer for your copy of the 24 page book "A Working Knowledge of Insecticides and Fungicides and How to Use Them."



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## STATE NEWS

(Continued from page 13)

berry variety recommended for commercial planting. Fairfax, a dark variety of high quality, is recommended for home use. Cas-skill is recommended for early midseason. Everbearing strawberries were suggested only for home use and special markets. In addition to Mastodon, Gem and Wayzata, the latter well adapted to the hill system of culture because it produces few runners, were added to the recommended list of everbearers.—F. H. BEACH, Sec'y, Columbus.

**MAINE**—There seems to be a little more than average interest in fruit tree planting this year, and a decided up-trend in the purchase of spraying equipment. Both of these items suggest an optimistic outlook on the part of our apple growers.—J. H. WARING, Orono.

**VIRGINIA**—It's more dollars in Virginia growers' pockets if the experiments being conducted at Blacksburg by Dr. Fred W. Hofmann, Virginia Experiment Station's research horticulturist, prove out.

In these experiments an effort is being made to develop a vinifera type of grape which will combine the hardiness of the labrusca, of which the Concord is an example, with the rich-flavored wine varieties of the vinifera type which thrive best in this country in California. The pure vinifera varieties in Virginia are susceptible to pests and winterkill.

The cross-pollination of the hybrids involved interesting plant breeding technique because the hybrids bloom a month earlier than the Virginia viniferas, but the California viniferas bloom at the same period as the hybrids. Taking advantage of this opportunity, vinifera pollen from California was placed in bottles, flown east to Virginia, and applied to the crosses 24 hours later!

Dr. Hofmann's new grape seedlings are expected to bear ahead of time due to special forcing methods.

## AVOID SEIZURE!

Of importance to fruit growers is a new regulation of the Federal Food and Drug Act, effective June 25, which demands that every container of fresh fruits and vegetables shall contain the "name and place of business of the manufacturer, packer or distributor," together with "an accurate statement of the quantity of the contents in terms of weight, measure or numerical count." Berry or other containers of one quart or less are exempt; however, the large container in which they are transported must be marked as above, and in addition must show the number of small containers packed in it and the quantity of contents of each such small container or cup.



## Kill Garden Weeds

**Quick-Easy** With a Barker Weeder Mulcher & Cultivator, "Bark Weeder Ever Used," makes perfect soil mulch at same time. Only weeder-mulcher with Filler Drum. 50% better. Easiest to use; lowest prices. 8 sizes. Write

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"Winds high," jubilant  
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But Hamilton Guns  
put them all to rout.

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Spray Guns with Controlled Streamline

**W. L. HAMILTON & CO.**  
BANGOR • MICHIGAN

**Six Models** • A GUN FOR EVERY PURPOSE  
Send For Catalog

## "BETTER GRADING"

(Continued from page 16)

ready for it. Mrs. American Housewife still likes to pick her three, five, or 10 pounds of apples out of a pile. This habit is another reason why I constantly preach good packing. If a retailer pours a bad pack out on his counter, by the time his customers have picked out the best fruit, only trash remains, and trash on the counters of our retail outlets can tear down thousands of dollars' worth of helpful advertising. Unfortunately, retailers seem to avoid culling out bad apples, although they do it with vegetables and even with some other fruits.

The box is here to stay for eastern apples. Although there will probably be some changes in size, the many favorable characteristics of the box are sufficient to make it a standard apple container. We handle a good volume of peaches and, if I am any judge, in a year or two you will see a good many peaches packed in boxes. For the past couple of seasons we have been seeing boxed peaches from the South on our northern markets. It's just a matter of time until the northern growers adopt a box. I am basing my statement on the fact that growers are realizing more and more that peaches must not be as green when picked as they have been in the past. Premium prices are ready for those growers who allow their peaches to ripen more on the trees and then make use of the protection afforded by the box pack.

As I told those growers the other night, the only way to remedy our apple marketing situation is to get out and sell the public. I am speaking a good bit about apples, but that is because I am most interested in them. I feel that to obtain funds that will enable us to get out and sell the public, voluntary contributions on the part of growers and marketing men are the best. This may sound strange, but I firmly believe that unless we do this ourselves, someone else may do it for us and then we won't be satisfied.

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**Complete  
JUNE DIRECTORY  
ISSUE**

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## "BETTER SELLING"

(Continued from page 9)

export outlet which helped the domestic market. Apples were second, and cherries third, with citrus running last because of the difficulties involved in moving the big crop.

Although I'm in a position which  
(Continued on page 24)

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THE BUY WORD FOR  
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**EFFECTIVE AND ECONOMICAL CONTROL**

SCAB ON APPLES: Sufficient sulphur of proper fineness is of prime importance. Sulphur assures you of the proper quality.

PURITY: 98½% Sulphur.

PARTICLE SIZE:

- At least 95% by weight smaller than 27 microns.
- At least 75% by weight smaller than 15 microns.
- At least 50% by weight smaller than 10 microns.

BROWN ROT ON PEACHES: "CROWN" Brand Wet-table Sulphur assures you of the proper quality.

PURITY: 95% sulphur.

PARTICLE SIZE:

- At least 80% by weight smaller than 27 microns.
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Write for special circulars; mention name of your nearest dealer.

**STAUFFER CHEMICAL COMPANY**  
420 Lexington Avenue, New York City  
230 N. Michigan Ave., Chicago, Ill. — Freeport, Texas

## CITRUS • (Continued from page 10)

to the station over which they received the broadcasts, letters and cards expressing their thanks for this service so necessary for the production of quality citrus.

Reflected in this service by the radio stations is the fact that they realize the importance of maintaining successful fruit plantings and prosperous fruit growers in the communities which they serve.

### HARVEST EXTENSION

Since Valencia oranges are not preferred hosts of the Mexican fruit fly and are rarely infested with this insect, Lee A. Strong, chief of the Bureau of Entomology and Plant Quarantine of the U.S.D.A., has extended the season of harvesting these oranges under the Mexican fruit fly quarantine regulation to include June 15 in four Texas counties. The harvesting season under the quarantine, as in the past, closes on April 30. This quarantine modification has no effect on the close of the grapefruit harvesting season in this area, now set for April 30.

### "BETTER SELLING"

(Continued from page 23)

might call for prejudice, I sincerely believe that the promotion of any fruit should be done without thought as to where this fruit was produced. I think the apple leaders in the Northwest have set an excellent example in not boldly identifying their advertising literature. They maintain that increased use of all apples will be to their benefit. Out of the many marketing conferences brought about to aid in moving citrus this year has come an understanding between the three large citrus areas that many thought to be impossible up to now. To my way of thinking we must follow the story-book advice of the three famous soldiers of fiction—"All for one and one for all"—in our fight to win greater recognition for fruits, the health food for the nation.

**TEMPERED RUBBER**

GIVES THE "U. S." ROYAL BOOT LONG LIFE AND HANDSOME, RUGGED APPEARANCE. DISTINCTIVE TIRE TREAD SOLE. PIGSKIN FINISH. AND, LIKE OTHER "U. S." BOOTS, EVERY BOOT IS LEAK-TESTED BEFORE IT LEAVES THE FACTORY.

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## • H. R. LETCHER •

In Portland, Oregon, on March 10, death claimed a popular veteran of the spray equipment industry, H. R. Letcher. Since 1935, Mr. Letcher had been president of the Hardie Mfg. Co., Hudson, Mich. For several years previous to 1935 he served as vice-president of the firm in charge of their west coast operations. After assuming the Hardie presidency, Mr. Letcher remained in the West where he had been active in sprayer sales and research for so many years. More than 30 years ago he established the Hardie Portland branch and in 1917

organized the Los Angeles branch. A strong advocate of efficient and improved spraying equipment, Mr. Letcher was probably best known to fruit growers in the Pacific Northwest where he pioneered in supplying equipment to growers who were just getting a start in a new enterprise for a new country.

### BOOKS FOR FRUITMEN

FARM GUIDE Book is a 72-page handy pocket size guide and account book just published by the Firestone Farm Service Bureau. Within its attractive and durable cover is complete information on 100 subjects of interest to fruit growers and farmers, including such valuable information as rules for planting fruit trees, weight and measure tables, a simple rule for determining the amount of paint required for a given surface, together with information on wheel weights, water ballast, and anti-freeze solutions for tractor tires, tractor hitches, and air pressure recommendations. A 12-month account section has been provided for income and expense records, also complete calendars for 1939 and 1940 and a page for personal identification and for listing of important data on automobiles, trucks, and tractors. Available upon request to Firestone Farm Service Bureau, Akron, Ohio.

Reports of the Berlin proceedings of the 12th International Horticultural Congress, made up of two nicely bound and illustrated volumes, are now available to fruit growers in this country. Cost of the volumes is around \$4 including postage. Copies of the volumes may be obtained through AMERICAN FRUIT GROWER.

### PAN EVERYTHING IN ONE PACKAGE A No Waste—No Bother

U.S. Patent No. 1943181

Protect your Peaches with PAN the COMPLETE SUMMER SPRAY preferred by the leading commercial growers in the famous Peach sections of the Southeastern States. AS CHEAP AS "HOME-MIXED" FORMULAE! Write for descriptive pamphlet today.

Also information about the new DI-CHLOR-MULSION treatment to kill the Peach Tree-borer.

THE J. W. WOOLFOLK COMPANY  
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APRIL 1939



H. R. LETCHER



## Profit ALL ways with CLETRAC DIESELS

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One Cletrac owner reports: "We have now worked our Cletrac Diesel over 668 hours in plowing, harrowing, spraying, dusting and other work in the orchards and find that we have already saved the difference in the cost of the Diesel over our gasoline machine of another make. To say that I am pleased with results puts it mildly. I want to thank you for persuading me to buy a Cletrac."

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Built to Endure

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THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia

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AMERICAN FRUIT GROWER

PAGE 25

# NEW INSECT Control TECHNIQUE!



ALORCO Cryolite stops chewing insects, protects fruit and ground crops. Offers new approach to tolerance problem. Specify Alorco; dusted or sprayed, the finer particles 15 times as many particles for a given weight cover better, stick better, kill better, are easily removed. Buy from your dealer, or write distributors for complete, authoritative information.

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## H. W. SCARRATT ADVANCED TO NEW POSITION

INTO International Harvester Company's important position of vice-president in charge of engineering and patents last month went veteran engineer, H. W. Scarratt. He succeeds Edward A. Johnston who retired after more than 45 years of service with the Harvester Company or its predecessors. In both the automotive and agricultural engineering fields, Mr. Scarratt has held prominent positions. From 1905 to 1913 he served as engineer with the Twin City Rapid Transit Co. of St. Paul and then became, successively, designer, tractor engineer, and chief engineer during the 13 years he was connected with the Minneapolis Steel and Machinery Co., mechanical division. In 1926 he joined the Hyatt Roller Bearing Co. where he soon advanced to chief engineer. Mr. Scarratt's affiliation with the International Harvester Co. started in 1927 as chief engineer of motor trucks and coaches; in 1936 he became assistant to the vice-president of engineering.



H. W. SCARRATT

## NICHOLS COPPER SULPHATE

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because it assures all-important accuracy of copper content, dissolves quickly, covers uniformly. Easy

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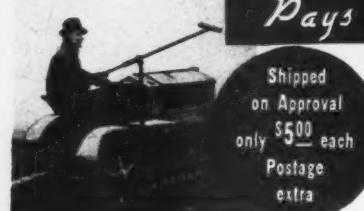
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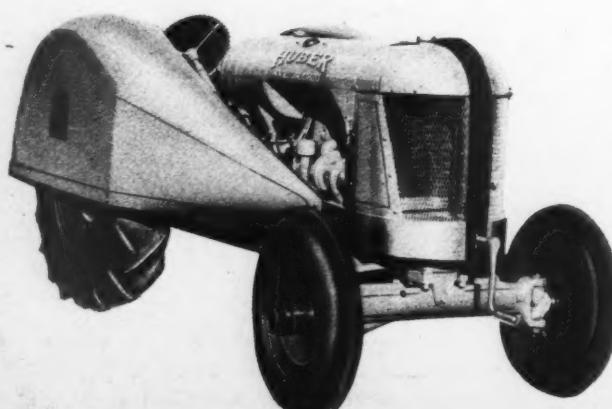
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### WHITACRE ONE-MAN SPRAY ATTACHMENT

Now, for the first time, one man can spray a large orchard without assistance. Big savings in Time and Money! This means more profits! The Whitacre ONE-MAN Spray Attachment is quickly bolted to

Whitacre Associates 4408 Perkins Road CLEVELAND, OHIO

## HUBER'S ORCHARD TYPE TRACTOR



Here's a tractor having EVERY feature needed in the Orchard . . . short wheel base . . . low height (48" to top of hood) . . . heavy streamlined fenders for protecting low hanging branches . . . four speeds forward . . . easy steering . . . comfortable riding. . . Under Huber's Streamlined hood is a sturdy, powerful, heavy-duty motor which develops sufficient power to pull two 14-inch plows with ease. . . . Can be supplied with power take-off for operating spraying equipment, etc. It is ECONOMICAL to OPERATE. Write today for detailed information and specifications.

THE HUBER MFG. CO.  
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## Newest PLANT INTRODUCTIONS of

PROFESSOR N. E. HANSEN  
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Send for Latest Complete List of the newest, hardiest Plant Introductions of Bush Cherry, Plums, Apricots, Apples, Flowers, Shrubs, Roses, Ornamentals, Drought Resistant Grains and Grasses, etc. Illustrated Catalog Free.

**SPECIAL!** 1 New Hansen Bush Cherry with every request for our catalog and 20¢ for mailing.

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BROOKINGS      SOUTH DAKOTA

## FRUIT TREES

Peaches, Pears, Apples, Plums, etc.  
Excellent stock. Write for catalog. Box  
"A," The Storrs & Harrison Company,  
85 years at Painesville, Ohio.

### FRUIT TREES-BERRY PLANTS

Don't buy before sending for our free 1939 catalog of standard and improved varieties of well rooted, triple inspected stocks, raised under soil and climatic conditions that make "Bountiful Ridge" the choice of planters who grow for real profit. One of America's leading nurseries with 3 generations of growing experience selling direct to the planter.

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Grown by Virginia's Largest Growers

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500,000 PEACH in a large assortment of varieties and sizes. Bud cut from bearing orchards, assuring planters of trees true to name.  
300,000 APPLE in the New Double Red Strains, as well as in the more popular standard varieties.  
WRITE FOR FREE COPY OF OUR 44 PAGE PLANTING GUIDE and New Low Price List.

**WAYNESBORO NURSERIES.** Waynesboro, Virginia

**Superior FRUIT TREES**  
BERRIES-ORNAMENTALS

Every Fruit Grower and Home Owner should have a FREE copy of our big 68-page Planter's Guide. Faithfully describes the Best Fruits, Berries and Ornamentals for farm, suburban and city plantings, at new low prices. Write today.

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Our propagating wood is all taken from our disease free Scion Orchard; from trees that we know are true to name.

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Please write for Special Prices

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Allen's 1939 Berry Book Describes Best Methods, Plants, Varieties: Premier, Fairfax, Dorsett, Catakill.  
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Delicious, U. S. Gov't Hybrids, large as grapes. Cabot, Rubel, Concord, Rancocas, Jersey, etc.  
2-Yr. Plants, 50 cents each, \$5 dozen, \$40 per 100  
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**GEO. C. MORSE**      **WILLIAMSON, N. Y.**

**WINDMASTER**  
New Patented Spray Gun  
Greater distance. Better fog  
Write to  
Windmaster Spray Gun Co.  
Hood River, Oregon  
**WATCH THIS NAME**

**WINDMASTER**

## NUT-TREE PLANTING PLAN

THE breeding of nut trees is a project that has not received extensive attention from public institutions or private individuals. The lack of funds, the long time to wait for results, and the fact that the commercial possibilities of these crops are not as certain as with many other agricultural plants have contributed to this neglect. However, there is no reason to believe that nut trees will not respond to systematic breeding.

To assist in the improvement of our native nuts, it is not necessary that one be a highly trained geneticist with extensive laboratories at his command. The essential thing is that lots of seedlings possessing desirable germ plasma be raised. If this seed is produced by hybridizing superior varieties, so much the better. If this is not possible, the next best thing is the planting of seed from the best sorts in a variety collection or from the best wild trees.

Farmers and other landowners who would like to assist in nut tree variety improvement will be interested in the plan being followed by John Davidson of Xenia, Ohio, which was described in a paper before the Boston meeting of the Northern Nut Growers' Association.

Starting with black walnuts, Mr. Davidson selected seed from the best native trees and later purchased seed of cultivated varieties. The resulting seedlings are set 22 feet by eight feet which will permit them to fruit without undue crowding. Fast growing trees, chiefly mulberry, will be set between the rows to force straight tall growth of the walnuts which will be left for timber after having undergone selection. The mulberries will make good fence posts. With this method he hopes to get good new varieties as well as a crop of timber.

The seedlings and yearling trees are hoed, the older take care of themselves! The space between the rows is seeded to clover which is mowed and the mowings left in the rows.

Although Mr. Davidson is north of the pecan region, he is planting seedlings from northern varieties with the hope of originating a variety that will mature farther north than present known sorts.

He is also planting grafted varieties of northern pecans, Carpathian walnuts, and chestnuts in orchard form, protecting the trees with wire guards and using the land as sheep pasture.

In still another area, seeds are being planted to be later grafted to outstanding varieties from the first orchard. He believes that because of the difficulty of transplanting nut trees seeds may be planted where the tree is permanently to stand and later to be grafted.—GEORGE L. SLATE, Sec'y, Northern Nut Growers' Assn., Geneva, N.Y.

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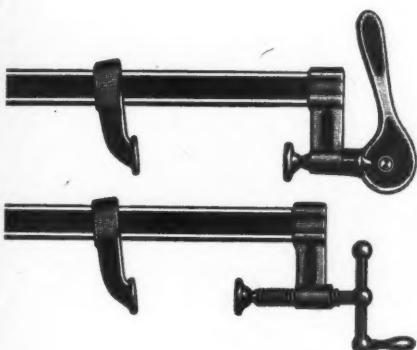
- WORKSHOP CLAMPS
- WHEELBARROW SPRAYER

By HANDY ANDY

There's many an answer for and against the fruit farm workshop. Some growers I talk to say they wouldn't be without a completely equipped farm shop, others seem to be well satisfied with just an anvil and forge or maybe a drill press too, and I've visited some places where the grower says he wouldn't have a shop under any consideration. I've always maintained that a good shop—you don't need a lot of fancy equipment and tools—comes in mighty handy in saving time and money, which helps on any farm.

## WORKSHOP CLAMPS •

All this talk about fruit farm workshops started when I recently saw a set of cabinet clamps being used to good advantage by a grower friend of mine as he was repairing the tank of his sprayer. He says that they are used a good bit in his farm shop, so I'm bringing them to the attention of our readers.



The upper clamp in the illustration is the eccentric type and, according to the firm that makes the clamps, is the most popular among users. The sliding foot on the clamp has an improved locking

device that will grip the bar at any point without the necessity of notches.

The clamps are supplied in all sizes from 10 to 96 inches. The particular type of clamp shown in the picture has a two-inch reach and is made of one and one-quarter inch I-bar steel.

## WHEELBARROW SPRAYER •

What looks to be an item of real interest for the nurseryman, berry grower, or fruit grower with a small planting, is the new wheelbarrow sprayer shown in the bottom photo. This compact outfit has a porcelain-lined pump that delivers 225 pounds pressure. The one-half horse-power, four-cycle engine is air cooled and has a hand lever starter. An electric motor can be substituted for the engine if the sprayer is to be used where current is available.

The unit is balanced on an all-steel, arc-welded frame which, along with the rubber-tired wheel, makes for easy operation. Agitation of the spray material in the tank is accomplished by movement of the suction pipe and strainer.

Length of the sprayer is 55 inches with the handles in operating position and 36 inches when the handles are folded for storing. The unit stands 41 inches high and is 24 inches wide with the handles in place and 15 inches when handles are folded. Accessories furnished with the sprayer include 15 feet of hose, lever shut-off, adjustable nozzle, and gauge.

**BORON IN AGRICULTURE** is the title of a new bulletin I've just looked over. Of most interest to fruit growers is the section devoted to descriptions and photos showing what happens when boron is lacking in fruit soils. Symptoms and methods for correcting boron deficiencies for a number of crops are discussed.

In **BLACK LEAF 155**, there's a complete new cover spray schedule for using this new fixed nicotine. Growers interested in keeping up on latest spray materials and practices will want to read this helpful eight-page booklet. A folder, **FINE CROPS AND PRODUCTIVE TREES**, gives hints on use of nicotine and contains colored illustrations of apple bud development.



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NEW IDEAS

## PROMPT SURGERY HELPS SAVE VALUABLE TREES

LEADING off this month's "Round Table" discussion, Arkansas fruit grower R. V. Hughes writes:

"I would like to mention the heavy loss of good bearing trees in many orchards from the want of a little tree surgery. Sometimes a valuable tree will split at the crotch of a limb, which if left alone will soon either decay or split wide open and the tree will die. To save such a tree, it can be bolted together with either a three-eighth or one-half inch bolt made in the farm shop from ordinary round iron rods. If decay is developing in the open crotch, a good healing filler is ordinary asphalt thickened to a paste with sawdust and sterilized with a little creosote to kill any blight germs. I have in my orchard over 50 fine trees that would have been dead had I not used this method of home tree surgery."

## OBTAINS PROPER TRAINING— RETAINS DESIRED BRANCHES

A PROBLEM that often comes up when pruning young fruit trees to a definite type of growth has been met by L. A. Lawler of Tennessee. If it has worked for him, it should work for you.

"The following is a summary of my system of shaping young fruit trees. When branches that are not to be pruned are too close together, I take cornstalks and cut them to different lengths. I cut V-shaped notches in the ends of the pieces of stalks. The stalks are then placed end-ways between the branches which are easily held apart. So far, I've had no trouble with the stalks injuring the branches. In this way I've found that the tree can be given the proper shape, the best branches can be kept, and there won't be any rubbing together of the branches which will some day form the framework of the tree."

## OLD STRAW STACK USED FOR ORCHARD MULCHING

PROBABLY the most popular phase of fruit soil management, especially in sod orchards, is mulching. Any fruit grower discussion will usually bring out such important mulching questions as: What are the best materials? When should the mulch be applied? How deep? How close to the trees? One Ohio grower has apparently solved his mulching problem. Leo J. De Chant writes:

"A year ago this February I bought a two-year-old straw stack and spread it about six inches thick under the trees as far out from the trunk as the branches extend. It proved a most satisfactory mulch which held the winter moisture very satisfactorily through the summer. The mulch also prevented apples from bruising when they were blown from the trees during a couple of windstorms we had last fall.

"I believe there are two particular times when application of the mulch is best. In cold sections where there are dangers of late frost, it is best to apply

Here, each month, growers get together to discuss experiences and ideas. The beginner as well as the veteran discovers many practical suggestions for better and more profitable fruit growing. You, too, have some experiences that will be helpful to fellow growers. Send them—briefly written on a penny card is satisfactory—to "ROUND TABLE EDITOR," AMERICAN FRUIT GROWER, 1370 Ontario St., Cleveland, Ohio. One dollar will be paid for each item published on this page.

the mulch when the ground is frozen, for the mulch keeps the ground from thawing and growth that otherwise would be too early is held back. In warmer sections I believe it is best to apply the mulch when the ground is thawed, for it hastens the early growth and gets the crop off to a good start."

## FEBRUARY "ROUND TABLE" ITEMS WERE WELL-FOUNDED

THAT two of the experiences of growers described on the February "Round Table" page were based on long-existing facts is revealed in the following note from Mrs. Walter Bowden of Oklahoma.

"It is true, as Mrs. L. H. Norton and Harry Sparrow say in the February issue, about keeping trees safe from rabbits. My father used to shoot the rabbits and then open them up and rub the trees well. He made good money with his saddle horse, gun, and knife, riding from orchard to orchard."

In the February issue, Mrs. Norton recommended rubbing tree trunks with hog liver for rabbit control, and Mr. Sparrow suggested painting fresh beef blood on the trees.

## PROOF THAT FRUITS HAVE JUMBLED PARENTS

IN ONE of the most startling letters ever received by the "Round Table" editor, Louisiana grower W. T. Gaines discloses that: "My wife planted an apple core from a large Delicious apple. Four trees came up where the core had been planted. While they were still small, I transplanted them to the garden. They finally turned out to be four pear trees. And each tree was a different kind of pear! Two of them have the same flavor as the Delicious apple, but the shape of the fruit, also the manner in which the trees grow, is like a pear. The trees are all living and had four kinds of pears on them last year.

"How's that for one apple core!"

## SUGGESTS LARGER GUARDS TO PREVENT TREE GIRDLING

ON PAGE 22 of the December AMERICAN FRUIT GROWER Mr. Bohn does not give the diameter of his mesh tree guards," says Amelia Riehl of Illinois. This contributor adds: "In the year 1926, we used guards of this type about eight inches in diameter on newly-planted chestnut trees. The trees grew fast and had heavy, leafy tops. These were blown by the wind against the tops of the guards and the bark was so bruised that the trees were practically girdled. Some broke off at the top of the guard. Perhaps staking the trees or using guards of greater diameter would prevent this trouble."

"Round Table" readers will recall that Iowa contributor H. E. Nichols suggested, in the February issue, that where the mesh guards must be used while trees are young the trees should be wrapped to prevent girdling. The item above presents another way to overcome the trouble.



AMERICAN FRUIT GROWER



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## See the Difference "MIKE" SULFUR Makes

These healthy, vigorous leaves were sprayed with "MIKE" SULFUR—enabled the tree to produce top-grade fruit.

"MIKE" SULFUR'S high toxicity—more than 95% active sulfur—controls scab infestation without burning foliage. When sprayed with non-caustic "MIKE" SULFUR, trees have a chance to develop the big, green, healthy leaves so necessary to mature top-grade fruit.

### MICROSCOPIC FINENESS FOR MAXIMUM PROTECTION

"MIKE" SULFUR'S microscopic particle size—more than 15 times finer

than 325 mesh sulfur—results in more uniform coverage. This extreme fineness enables "MIKE" SULFUR particles to stick to fruit and foliage better, resist the washing effect of rain longer.

### EASY TO APPLY— ECONOMICAL TO USE

"MIKE" SULFUR goes into suspension almost instantly—even without an agitator. Its microscopic particles keep it in suspension

longer. "MIKE" SULFUR is less expensive to use because it gives longer lasting protection. It remains free-flowing indefinitely—does not deteriorate with age.

### THE DOW CHEMICAL COMPANY MIDLAND, MICHIGAN

Branch Sales Offices: 30 Rockefeller Plaza, New York City—Second and Madison Streets, St. Louis—Field Building, Chicago.

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